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ABSTRACT OF THE DISCLOSURE

A tuneable grating assisted directional optical coupler to couple a transmission signal has a first waveguide including a first core and a first cladding, the first waveguide having a first effective refractive index. The coupler also has a second waveguide including a second core and a second cladding, the second waveguide having a second effective refractive index different from the first effective index and being in substantially close proximity to the first waveguide in a predetermined region to provide coupling therebetween. A periodic perturbation is positioned in the coupling region to cause the coupling to be wavelength selective for one given wavelength function of the first and/or the second effective refractive index. Additionally, the second cladding of the second waveguide has a tuneable material and the first cladding of the first waveguide has a non-tuneable material.